

# Identifying and analyzing the construction and effectiveness of offensive plays in basketball by using systematic observation

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In the sports field research there is a growing need for the rigorous collection of data that provide empirical evidence about the complex reality which they relate. Key issues in this regard include the presence of regularities that are not detectable through inference visual or traditional methods of data analysis, the lack of standard instruments for observation and priority need to develop powerful, computerized systems coding, all of whom must be part of an approach that is suitable for natural and normal contexts [1].

This study is part of a broader research project regarding equipment ACB (Spanish first division basketball) and considers the interaction context teams before trying to score, which means teams how to create advantages for recording as the central issue that unites team game.

In previous studies have described the various tools developed for football for soccer (SOF-5), handball (SOB-1), basketball (SOBL-2) and volleyball (SOV-1)., its goal is to get more information about the dynamics asípoder the game and learn about the effectiveness of basketball and optimizing their offensive strategies. This new instrument (Soble-1) identified 26 areas in the basketball court to discuss actions that offers advantages to record by recording the location of the last two passes and the last two receptions before the team record basket.

## Objectives

To detect the patterns which enable us to understand the behavior of the basketball plays that have been designed by the coaches, and to conduct a microanalysis of this context giving then different solutions to change the systems and get them more effective.

## Method

The design was observational nomotética, and multidimensional point within the follow-up session. Thirty basketball games were recorded and the instrument used was the Match Vision Studio software, which has enabled us to set up code and category of the situation space of the players in the two previous moves to the basket. We used the software Thème 6 (beta) that conducted the analysis of patterns, patterns of behavior sub-satellite players in the two previous offensive actions to achieve the basket and the behavior of systems basketball offensive and how to improve them.

## Results

The results show that it is possible to identify stable spatial structures that provide information about areas and positions of players more effective in launching basket and an imbalance that provide more effective for completion and the

type of termination of attack that can be applied for the improvement of sports training and initiation.

## Key words

T- Patterns, microanalysis, team sports, observation instrument, systematic observation.

## References

1. Anguera, M.T., Blanco-Villaseñor, A. y Losada, J.L. (2001). Diseños Observacionales, cuestión clave en el proceso de la metodología observacional. *Metodología de las Ciencias del Comportamiento*, **3**(2), 135-161.
2. Anguera, M.T. (2005). Microanalysis of T-patterns. Analysis of simmetry/assimetry in social interaction. In L. Anolli, S. Duncan, M. Magnusson & G. Riva (Eds.), *The hidden structure of social interaction. From Genomics to Culture Patterns* (pp. 51-70). Amsterdam: IOS Press.
3. Lonsdale, C. & Tam, J.T.M. (2007). On the temporal and behavioural consistency of pre-performance routines: An intra-individual analysis of elite basketball players' free throw shooting accuracy. *Journal of Sports Sciences*, **26**(3), 259-266.
4. Magnusson, M.S. (1996). Hidden real-time patterns in intra- and inter-individual behavior. *European Journal of Psychological Assessment*, **12**(2), 112-123.
5. Magnusson, M.S. (2000). Discovering hidden time patterns in behavior: T-patterns and their detection. *Behavior Research Methods, Instruments, & Computers*, **32**(1), 93-110.
6. Miller, S. & Barlett, R.M. (1993). The effects of increased shooting distance in the basketball jump shot. *Journal of Sports Sciences*, **11**(4), 285-293.
7. Miller, S. & Barlett, R.M. (1996). The relationship between basketball shooting kinematics, distance and playing position. *Journal of Sports Sciences*, **14**(3), 243-253.
8. Ortega, E., Cárdenas, D., Sainz de Baranda, P., & Palao, J. M. (2006). Analysis of the final actions used in basketball during formative years according to player's position. *Journal of Human Movement Studies*, **50**(6), 421-437.
9. Perea, A., Alday, L., & Castellano, J. (2004). Software para la observación deportiva Match Vision Studio. *III Congreso Vasco del Deporte. Socialización y Deporte / Kirolaren III Euskal Biltzarra. Sozializazioa era Virola*. Vitoria.
10. Romanowich, P., Bourret, J., & Vollmer, T. R. (2007). Further analysis of the matching law to describe two- and three-point shot allocation by professional basketball players. *Journal of Applied Behavior Analysis*, **40**(2), 311-315.
11. Sampaio, J., Janeira, M., Ibáñez, S., & Lorenzo, A. (2006). Discriminant analysis of game-related statistics between basketball guards, forwards and centres in three professional leagues. *European Journal of Sport Science*, **6**(3), 173-178.
12. Swalgin, K. (1994). The Basketball Evaluation System: A Scientific Approach To Player Evaluation. In J. Krause (Ed.) *Coaching Basketball. National Association of Basketball Coaches*. New York: Masters Press.
13. Turner, A.P. (1995). Teaching for understanding: a model for improving decision making during game play. *Quest*, **47**(1), 44-63.